VARIABLE VOLTAGE PSU AND BATTERY CHARGER

For when failure is not an option.

Versatile Power Supply and Battery Charger, designed for use with level crossings. However, due to its wide rating spectrum it can be used in almost every signalling application.

The unit includes 2 x Enatel Rectifiers configured to provide N+1 redundancy. In addition to the other features you would expect of a highly robust Milspec unit.

The digital display clearly provides all required performance information and remote fault monitoring can also be provided.

A modern polyester IP66 plastic enclosure makes the unit a manageable weight while losing nothing in protective strength.

AC input
Nominal Voltage: 110/220V, 50/60hz
Voltage Range: 100-275V AC (full power output), 85-100V AC (reduced power output)
Frequency Range: 45-66Hz, Power Factor: >0.99 (full load), Efficiency: 85%
Input Fuses: HRC Fuses in phase & neutral
Max Input Current: 8A
Input Voltage: Automatic shutdown protection restarts unit automatically when correct voltage restored.
Input Rush: Input Rush: <2x maximum input current.
Isolation: Input to Output: 3000V AC, Input to Chassis: 2500V AC (VDR to chassis removed), Output to Chassis: 1500V AC

DC output
Nominal Voltage: 12V, Rated Voltage: 14.5V, Voltage Range: 11.5-15V
Maximum Current: 40A for (N+1) Redundancy configuration
Load sharing ability
Regulation: Line: ±0.1%, Load±0.5% (no load to full load)
Hold-up Time: >15ms for 20% output voltage
Start-up Time: Walk-in delay 2 seconds (depends on AC input voltage)
Current Limit: Adjustable to 50-100% of maximum Rated current.
BATTERY CHARGERS

Protection: Over Temp: Automatic current turndown, backup shutdown protection.
Polarity Reversal: Output fuse with crowbar diode
Over Voltage: Adjustable limit.
Battery temperature compensation: With the optional probe connected to the battery, the charger will adjust the charging rate according to the ambient battery temperature, to maintain optimum charge rate.

Noise: Ripple < 100Hz <5mV rms un-weighted, Voice Band 100Hz to 5 KHz<0.5mV rms psophometric Wide Band 5kHz to1 MHz:<2.5mV rms un-weighted
Peak to Peak 0 -20MHz<50mV p-p un-weighted
Humidity 5-95% RH [non-condensing]
Altitude: <2500m de-rate maximum ambient temperature by +4˚ per 1000m above sea level.

Alarm and control interface: Remote monitoring with RJ45 monitor interface
Internal alarm card: Unit provides voltage free relay contacts for mains failure, rectifier failure, rectifier off normal (over temperature, over voltage, current limit), high voltage output and low voltage out puts.
Remote rectifier forced shutdown option by applying 10-12Volt signal to rectifier load share pin of monitor connection.

Environmental: Convection cooled rectifiers. Conformance coated for environmental protection
Normal Ambient Temperature: 25+/-5°C. Operating temperature range: -10 to +65°C
Humidity 5-95% RH (non-condensing)
Altitude: <2500m de-rate maximum ambient temperature by +4˚ per 1000m above sea level.
Dimensions: 635mm (H) x 535mm (w) x 250mm (D)
Weight of power supply: 11.5kg
Safety: EN60950, Electrostatic Discharge: CISPR24, Radiated Radio Frequency: CISPR22, AC Harmonics: EN61000-3-2, AC Flicker and Fluctuation: EN61000-3-3

Battery monitor provides visual indication of
Voltage and current
Charging status and ampere hours
Remaining battery percentage and estimated time to charge or fully discharge the battery

Adjustments
Following parameters are preset but can be adjusted as per the requirements.(Rectifiers to be removed from mounting frames in order to do the adjustments)
Boost voltage
Float voltage
Boost to float current
Over voltage shut down
Temperature comp slope
Low voltage detection on and off
Current limit protection
Altitude: <2500m de-rate maximum ambient temperature by +4˚ per 1000m above sea level.